Jetstream 31/ CAR Integration Status 23JAN06

Overview-

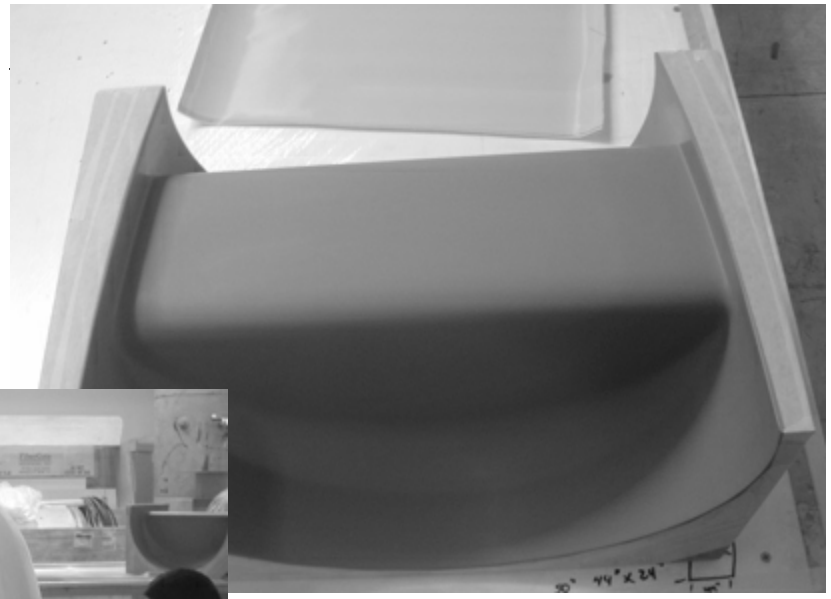
- ✈ Flight test plan complete
- ✈ Stress analysis at 85%
- ✈ Rotating controls unchanged
  - – Motor sizing re-evaluated due to space constraints
    - Next in work
    - Controls interface should be out today
- ✈ Composite fairing in work
- ✈ Rotating bulkhead in work
- ✈ Remaining material on order
- ✈ Airframe attachments reviewed and approach confirmed

Rotating elements

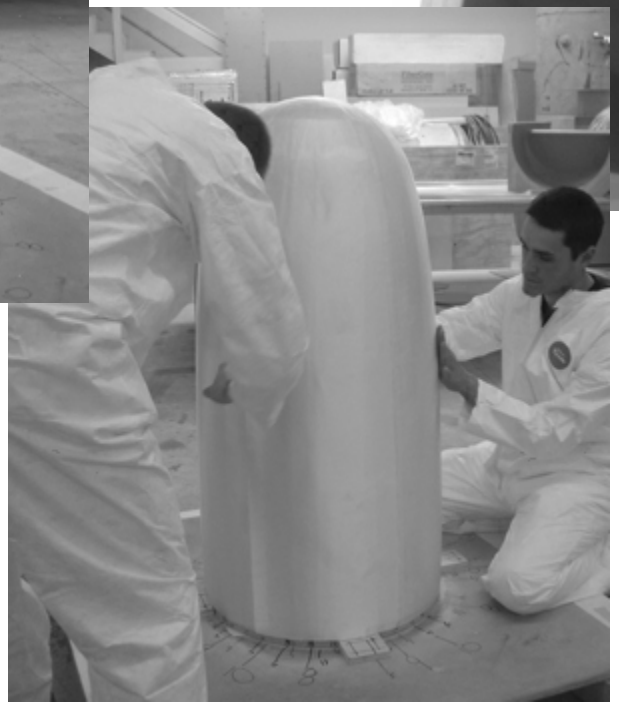
- CAR and rotating fairing
  - 5SR05005 Rotating Fairing
    - Body layup complete and in rough finish
    - Cavity layup starts today
  - Schedule- on dock at Sky 30JAN06
  - On schedule
- Rotating bulkhead machining complete

CAR fairing in fabrication

Laminate complete



Cavity tool complete



Final layup

Fixed elements in work

- CAR Spider
- Airframe attach details
  - Material in stock
- To be defined:
  - Motor attachment
    - Next on the punch list
  - Final shaft dimensions for bearing interface

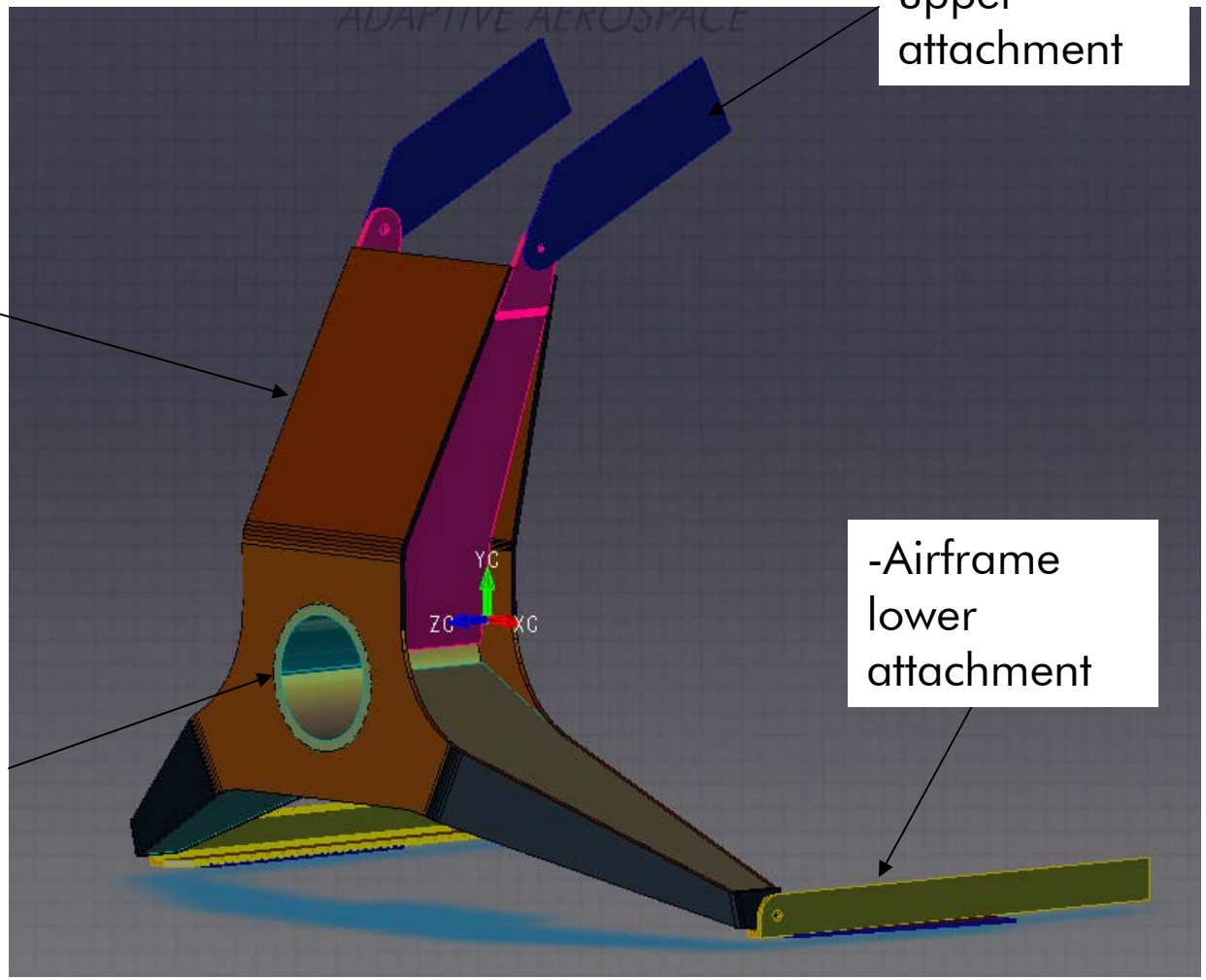
5SR05006-1 CAR Spider

-Airframe upper attachment

-Spider weldment

-.125 thick 4130 weldment

-in work

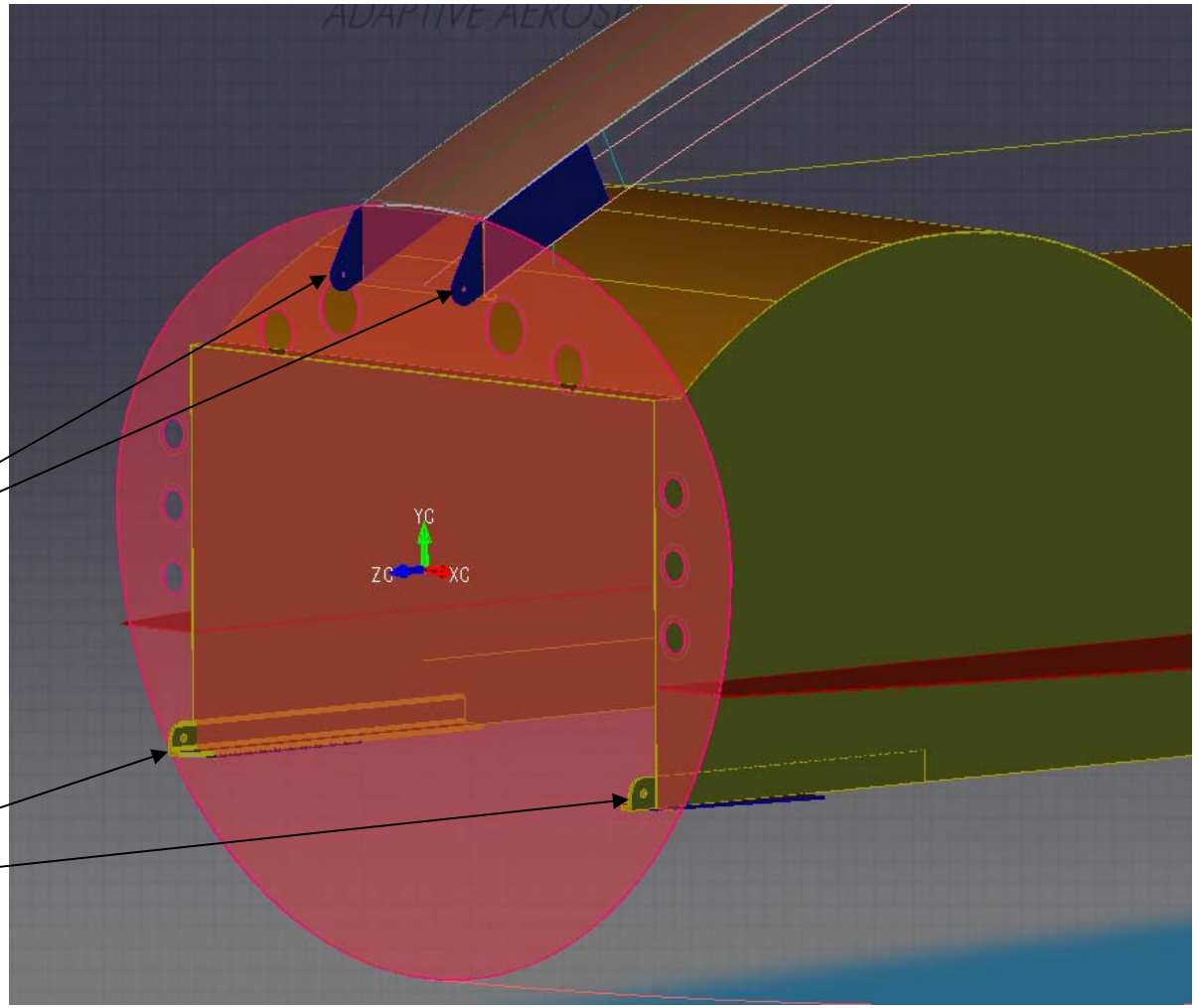


-Airframe lower attachment

-Shaft axis

Airframe attachment

- Location of hard points finalized
  - Detail design at 95%



Structural Analysis Overview

Preliminary stiffness analysis complete:

ROTATION AT FWD END OF SHAFT WITH SPIDER ROTATION INCLUDED:

θshaft =	4.37E-03 degrees	
θspider =	2.04E-03	*see "Spider" Tab*
Total=	**6.41E-03 degrees**	ccw

Note that structural deflections are calculated at ultimate (6.6g) load

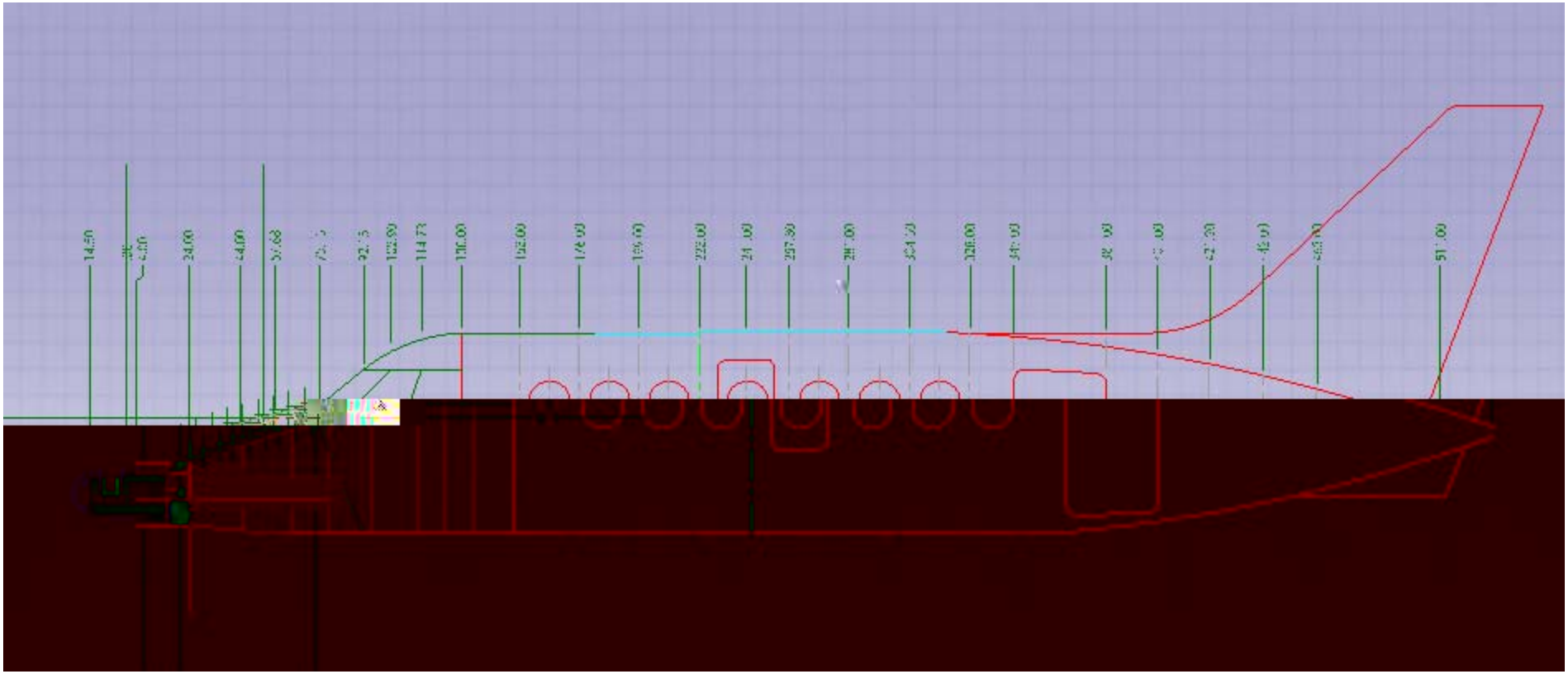
(A very small deflection, indeed, even in 1 g flight!)

Bulkhead stiffness evaluation in work, unlikely to exceed 2x of this value

Static strength:

-High structural margins in all evaluated components

Airframe overview



Fwd fuselage overview- different perspective